

***Amendments to the Claims***

This listing of claims will replace all prior versions and listings of claims.

1. (original) An isolated polynucleotide comprising a member selected from the group consisting of:

(a) a polynucleotide encoding the polypeptide comprising amino acid 1 to amino acid 142 of SEQ ID NO:2;

(b) a polynucleotide capable of hybridizing to and which is at least 70% identical to the polynucleotide of (a); and

(c) a polynucleotide fragment of the polynucleotide of (a) or (b).

2-14. (cancelled)

15. (original) A polypeptide selected from the group consisting of: (i) a polypeptide having the deduced amino acid sequence of SEQ ID NO:2 and fragments, analogs and derivatives thereof and (ii) a polypeptide encoded by the DNA of ATCC Deposit No. 75514 and fragments, analogs and derivatives of said polypeptide.

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16. (cancelled)

17. (original) An antibody against the polypeptide of claim 15.

18. (original) A compound which inhibits the polypeptide of claim 15.

19. (original) A compound which activates the polypeptide of claim 15.

20-21. (cancelled)

22. (original) The method of claim 20, wherein the polypeptide is administered by providing to the patient DNA encoding said polypeptide and expressing said polypeptide in vivo.

23. (original) A method for the treatment of a patient having need to inhibit HMF comprising: administering to the patient a therapeutically effective amount of the compound of claim 18.

24. (original) A process for identifying compounds active as agonists or antagonists to HMF comprising:

(a) combining a compound to be screened, the polypeptide of claim 15 and a reaction mixture containing cells under conditions where the cells are normally stimulated by said polypeptide, said reaction mixture containing a label incorporated into the cells as they proliferate; and

(b) determining the extent of proliferation of the cells to identify if the compound is an effective agonist or antagonist.

25. (original) A process for diagnosing a disease or the susceptibility to a disease related to the underexpression of the polypeptide of claim 15 comprising:

detecting in a sample derived from a host a mutation in the nucleic acid sequence of claim 1.

26. (cancelled)

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27. (new) A method for the treatment of a patient having need of HMF, comprising administering to the patient a therapeutically effective amount of a polypeptide selected from the group consisting of:

(a) a polypeptide comprising residues 1 to 142 of SEQ ID NO:2;  
(b) a polypeptide comprising residues 2 to 142 of SEQ ID NO:2;  
(c) a polypeptide comprising the amino acid sequence of the polypeptide encoded by the human cDNA contained in ATCC® Deposit No. 75514; and  
(d) a polypeptide comprising the amino acid sequence of the mature polypeptide encoded by the human cDNA contained in ATCC® Deposit No. 75514.

28. (new) The method of claim 27, wherein the polypeptide is (a).

29. (new) The method of claim 28, wherein the polypeptide is administered to treat leukemia.

30. (new) The method of claim 28, wherein the polypeptide is administered to treat blood-related disorders.

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31. (new) The method of claim 28, wherein the polypeptide is administered to stimulate differentiation and proliferation of cells of hematopoietic origin.

32. (new) The method of claim 28, wherein the polypeptide is administered to stimulate proliferation of cells of stromal origin.

33. (new) The method of claim 28, wherein the polypeptide is administered to promote the removal of malignant cells.

34. (new) The method of claim 28, wherein the polypeptide is administered to stimulate differentiation and proliferation of CD4+ or CD8+ T-cells.

35. (new) The method of claim 28, wherein the polypeptide is administered to stimulate differentiation and proliferation of thymocytes.

36. (new) The method of claim 27, wherein the polypeptide is (b).

37. (new) The method of claim 36, wherein the polypeptide is administered to treat leukemia.

38. (new) The method of claim 36, wherein the polypeptide is administered to treat blood-related disorders.

39. (new) The method of claim 36, wherein the polypeptide is administered to stimulate differentiation and proliferation of cells of hematopoietic origin.

40. (new) The method of claim 36, wherein the polypeptide is administered to stimulate proliferation of cells of stromal origin.

41. (new) The method of claim 36, wherein the polypeptide is administered to promote the removal of malignant cells.

42. (new) The method of claim 36, wherein the polypeptide is administered to stimulate differentiation and proliferation of CD4+ or CD8+ T-cells.

43. (new) The method of claim 36, wherein the polypeptide is administered to stimulate differentiation and proliferation of thymocytes.

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44. (new) The method of claim 27, wherein the polypeptide is (c).
45. (new) The method of claim 44, wherein the polypeptide is administered to treat leukemia.
46. (new) The method of claim 44, wherein the polypeptide is administered to treat blood-related disorders.
47. (new) The method of claim 44, wherein the polypeptide is administered to stimulate differentiation and proliferation of cells of hematopoietic origin.
48. (new) The method of claim 44, wherein the polypeptide is administered to stimulate proliferation of cells of stromal origin.
49. (new) The method of claim 44, wherein the polypeptide is administered to promote the removal of malignant cells.
50. (new) The method of claim 44, wherein the polypeptide is administered to stimulate differentiation and proliferation of CD4+ or CD8+ T-cells.
51. (new) The method of claim 44, wherein the polypeptide is administered to stimulate differentiation and proliferation of thymocytes.
52. (new) The method of claim 27, wherein the polypeptide is (d).
53. (new) The method of claim 52, wherein the polypeptide is administered to treat leukemia.
54. (new) The method of claim 52, wherein the polypeptide is administered to treat blood-related disorders.
55. (new) The method of claim 52, wherein the polypeptide is administered to stimulate differentiation and proliferation of cells of hematopoietic origin.
56. (new) The method of claim 52, wherein the polypeptide is administered to stimulate proliferation of cells of stromal origin.

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57. (new) The method of claim 52, wherein the polypeptide is administered to promote the removal of malignant cells.

58. (new) The method of claim 52, wherein the polypeptide is administered to stimulate differentiation and proliferation of CD4+ or CD8+ T-cells.

59. (new) The method of claim 52, wherein the polypeptide is administered to stimulate differentiation and proliferation of thymocytes.

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